



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,503	04/08/2004	J. Wallace Parce	100/00328	9826
21569	7590	09/29/2005	EXAMINER	
CALIPER LIFE SCIENCES, INC. 605 FAIRCHILD DRIVE MOUNTAIN VIEW, CA 94043-2234			CHIN, CHRISTOPHER L	
			ART UNIT	PAPER NUMBER

1641

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/821,503

Applicant(s)

PARCE ET AL.

Examiner

Christopher L. Chin

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 11-19, 24, and 25 is/are rejected.
- 7) ☒ Claim(s) 6, 10, 21-23 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - a.) The status of the parent applications cited on page 1 of the specification need to be updated.

Appropriate correction is required.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 2, 3, 9, 11, 12, 16, 18, 19, 20, 24, and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 22, 31, 43, 44, and 47 of U.S. Patent No. 5,942,443. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '443 patent claims a method with essentially the same limitations as the instantly claimed method.

Patent '443 claims a method of screening test compounds for an effect on an interaction between components of a biological system, comprising:

providing a substrate having at least two intersecting channels disposed therein, at least one of said at least two intersecting channels having at least one cross-sectional dimension in a range from 0.1 to 500 microns;

continuously flowing interacting components of a biochemical system in a first of said at least two intersecting channels;

flowing at least a first test compound from a second channel into said first channel whereby said first flowing test compound contacts said flowing components of said biochemical system; and

detecting an effect of said at least first flowing test compound on interactions between said continuously flowing components of said biochemical system.

The components of the biological system comprise cells which are flowed into the first channel and said detecting step comprises determining an effect of the test compound on the cells. The components and test compounds are flowed electroosmotically. An electrokinetic fluid direction system is used for flowing the components with the first channel and for introducing the plurality of test compounds from the second channel to the first channel.

The method in patent '443 differs from the instant invention in using a substrate having at least two intersecting channels which is not recited in the instant invention.

However, it would have been obvious to one of ordinary skill in the art the method of patent '443 reads on the instant invention because the instant claims do not exclude the use of a substrate that has two intersecting channels.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 2-5, 7-9, 11, 12, 16-20, 24, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Kricka et al.

Kricka et al (US Patent 5,744,366) disclose devices and methods to facilitate rapid and accurate analysis of a sample having cells characterized by their motility. The devices feature a solid substrate microfabricated to define a flow system including one or more ports or chambers connected by elongated channels of various shapes having a mesoscale cross-sectional dimension of 0.1 microns to 1000 microns (cols. 8-10). The flow channel includes a selection region where capture reagent selectively binds the cell type of interest. Optionally, two or more target chambers may be provided for collecting two or more motile cell types of interest. In another embodiment, the selection region

Art Unit: 1641

comprises an electric field which selectively influences motility of the cell type of interest, thereby effecting separation of that cell type from other cells in the mixed population (col. 4, line 59, to col. 5, line 7, and col. 6, lines 15-44). Samples can be injected into the device by syringe or pipette (col. 10, lines 18-23). Methods of screening test compounds in the device are taught where cells are situated in receiving wells and test compounds are deposited in target chambers that are connected to the receiving wells. Test compounds are evaluated relative to their ability to impede or enhance motility of the selected cell type (col. 14, lines 1-50).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kricka et al in view of Wilding et al.

See above for the teachings of Kricka et al.

The method of Kricka et al differs from the instant invention in failing to teach the use of computers to control the microfluidic device used in the method of Kricka et al.

Wilding et al (US Patent 5,637,469) discloses an appliance that is used in conjunction with a microfluidic device. The appliance controls pumps and other

Art Unit: 1641

components that required to move liquids along the microfluidic device as well as environmental conditions in the microfluidic device. The appliance includes a microprocessor (col. 4, lines 37-44, and col. 15, lines 51-60).

It would have been obvious to one of ordinary skill in the art to attach the microfluidic device used in the method of Kricka et al to the appliance taught by Wilding et al because the appliance of Wilding et al is for use with microfluidic devices like the device in the method of Kricka et al and provides the advantage of controlling the conditions in the microfluidic device.

#### ***Allowable Subject Matter***

8. Claims 6, 10, 21-23, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Chin whose telephone number is (571) 272-0815. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (571) 272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1641

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher L. Chin  
Primary Examiner  
Art Unit 1641

9/22/05